

IN THE CLAIMS:

1-3. (cancelled)

4. (currently amended) A method of manipulating neuronal ion channels, comprising: transfecting a ~~fast-spiking neuronal cell that expresses an mRNA encoding a Kv3.4 protein~~ with a vector encoding an siRNA directed against ~~an said mRNA encoding a Kv3.4 protein, wherein said siRNA targets positions 2222-2283 of a Kv3.4 nucleic acid described by GenBank accession number X62841, and~~ wherein said siRNA is capable of inhibiting Kv3.4 expression in said cell, ~~and wherein said cell is located in vitro or ex vivo.~~

5-9. (cancelled)

10. (currently amended) The method of claim ~~[[7]]~~4, further comprising the step of transplanting said cell into a subject.

11-16. (cancelled).

17. (new) The method of claim 4, wherein said siRNA is directed toward a Kv3.4 target selected from the group consisting of SEQ ID NOs: 3 and 4.